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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

HSRL-6J

VIA FACSIMILE AND REGULAR MAIL

February 15, 1995

Mr. John Imse, P.G.
ERM-North Central, Inc.
540 Lake Cook Road, Suite 300
Deerfield, Illinois 60015

Re: Comments on Technical Memorandum No. 4
Lenz Oil Site
Lemont, Illinois

Dear Mr. Imse:

U.S. EPA and Illinois EPA have completed their review of Technical Memorandum No. 4, dated January 18, 1995, regarding the recent LNAPL investigative activities at the Lenz Oil site. On the whole the memorandum fulfills its objective of providing the Agencies with a general summary of the data collected during the August through November 1994 field activities at the site. Most of the Agency review comments, which are listed below, are requests for clarification on some of the information in the document. The revisions necessary for Agency approval of the document are not expected to be significant. If ERM cannot at this time fully answer some of the questions raised by the comments, a description of how that information could be obtained may be appropriate.

Comment 1--Section 1.2, page 2
Please refer to the U.S. EPA oversight contractor, Black & Veatch, as an ARCS contractor throughout the document instead of using the name of the firm. For example, in the first bullet on this page, change the last sentence to read: "An Alternative Remedial Contracting Strategy (ARCS) contractor, under contract to...".

Comment 2--Section 1.3, page 5
In the first bullet item on the page, it states that no soil samples for P14 through P17 were required if bedrock was encountered prior to reaching the water table. According to the drilling log and the table of water level measurements, the water table level at P14 was consistently above bedrock. Please clarify.

Comment 3--Section 2.1, page 6
In the second bullet item, where the drilling of 12 piezometers, including P13, is discussed, it states that the piezometers were drilled without sampling from the top of bedrock to their total depth. According to the drilling log, P13 was not completed to bedrock. Please explain.

Comment 4--Section 2.4, page 10
Although Appendix E includes results of a baildown test at P01, the test at P01 is not mentioned in this section. Also, Appendix E lists results of the baildown test for G106L, but the text refers to a baildown test at G106S. Please revisit these two points and correct any discrepancies.

Comment 5--Section 2.5, pages 11 and 12
Change the reference to "B&V" on each of these pages to "the USEPA ARCS contractor".

Comment 6--Section 3.2, page 14
In the second paragraph, it states that the "weathered limestone residuum...provides an additional confining layer". First, this conclusion appears to be based solely on data from monitoring well G102S. If other information was used to reach this conclusion, please describe. Secondly, in Table 3-1, depths to groundwater in G102S measured the day the boring was drilled and nine days later are nearly the same. Please explain how the conclusion referred to above is consistent with this water level data.

The term "limestone" used in this paragraph is inconsistent with the descriptions of bedrock as dolomite in all other parts of the memorandum. Please clarify.

Comment 7--Section 3.2, pages 14 and 15
The fourth paragraph in Section 3.2 indicates that groundwater flows southeast toward the Des Plaines River. The orientation of piezometric surface contours on the November 1 and 9, 1994, contour maps appear to show a south to southwest flow direction (Appendix F). Explain why the piezometric surface orientation and apparent groundwater flow directions on these dates were not discussed and/or are not considered to be significant. Also, the piezometric surface contour maps should be overlain on a base map

which shows site features. This would provide a clearer picture of groundwater flow conditions beneath and in the vicinity of the site. Please include a north arrow on all contour maps in Appendix F.

Comment 8--Section 4.1, page 16
If the upper part of the dolomite acts as a confining layer for the LNAPL in some parts of Area 1, as indicated on page 14, discussion on how extensive the confining interval is and what effect it might have on determination of LNAPL extent and calculation of LNAPL volume should be included here.

Comment 9--Section 4.1, page 16
In the first bullet item, it states that because "the unconsolidated sediments were removed from the main excavation area to remove LNAPL during the initial remedial activities as indicated in the RI report, no LNAPL is expected to be present within the main excavation area". This statement is accurate overall, but could give the reader the impression that the IEPA conducted its immediate removal action with the main objective of incinerating soils to remove the LNAPL. This was not one of the IEPA's main objectives. In its efforts to mitigate the immediate threat to human health and the environment, IEPA excavated and incinerated contaminated soils, soils contaminated with LNAPL, and, undoubtedly, free product existing as LNAPL beneath the surface. Please revise the text accordingly.

In Section 4.1, no mention is made of the droplets of LNAPL observed in the development water for P24S, as noted in Table 1-1. Explanation of this observation should be included.

Comment 10--Section 4.2, page 18, paragraph 1
The text refers to G106L and MS-5S, while Table 4-2 refers to G106S and MW-5S. Please correct these discrepancies. Please correct other references to "MS-5S" in Section 4 if the correct label should be "MW-5S".

For each well where LNAPL thickness was measured, apparent thickness varied quite significantly over time. Due to this variability, it would facilitate review of the estimate of true LNAPL thickness if apparent thicknesses at the time of baildown test were included with the results of the baildown tests. A brief discussion of the variations in the measured apparent thicknesses, and the possible ramifications this would have on the estimate of LNAPL volume, should be included in this section. Also, include a statement about whether baildown tests were conducted when apparent LNAPL thicknesses were low or high and what effect this might have on the estimate of LNAPL volume.

Comment 11--Section 4.2, pages 18 and 19

If references to G106L being a significant control point for delineation of the LNAPL are correct, why are data for G106L not included in Table 4-2, and why is its location not included on any of the site figures? Should this be G102S instead of G106L? Also, although Table 4-2 shows data for G102S, Appendix E does not contain baildown test results for G102S. Please include test results for G102S if this location was tested. Also, including an isoplach map of the apparent LNAPL thickness would be useful to illustrate the data presented in Figure 4-1 and Table 4-2.

The second paragraph of Section 4.2 concludes with an estimation of true LNAPL thickness in Area 1. This figure was determined by methods described by Test and Paczkowski (1989), which were largely based on conditions where a capillary fringe zone was present. At the Lenz Oil site, because it is unlikely that a capillary fringe zone is present in the fractured bedrock system and because part of the LNAPL is in the bedrock, explanation is needed on why these methods are also applicable to the LNAPL in the bedrock at the site. Please provide discussion on why the apparent and estimates of true thicknesses of LNAPL found in the bedrock monitoring wells are similar to those in monitoring wells screened in the unconsolidated strata.

In the first bullet item on page 19, please check the calculation for average LNAPL thickness in Area 1 to see if it should be 0.08 feet rather than 0.07 feet.

For the determination of LNAPL volume, aquifer porosity is assumed to be 0.368, which is the number for unconsolidated sediments. Please provide justification for why this number can be used for the entire Area 1 even though approximately one-half of the LNAPL in this area is in the bedrock.

Comment 12, Section 4.2, page 20
Please replace the reference to "B&V" with "the USEPA ARCS contractor".

Comment 13, Section 5.1, page 21
The first sentence should be amended to indicate that the purpose of sampling the 2-foot interval above the water table was to determine if those soils had been contaminated with LNAPL.

In my letter to Elsie Millano dated December 8, 1994, the submittal date for the revised FS report was scheduled to be four weeks after receipt of Agency comments on Technical Memorandum No. 4. Based on a receipt date of February 16, 1995 for the comments, the revised FS report will be due on March 16, 1995.

Since submittal of the revised FS report is of higher priority than submittal of the revised technical memorandum, we could discuss an alternate submittal date for the revised memorandum if you don't think it will be possible to submit both documents by March 16th. Please let me know if you would like to arrange an alternate submittal date for the revised memorandum.

If you have any questions or would like to discuss any of the comments, please call me at (312) 886-4785.

Sincerely,

Mary Tierney

Mary Tierney
Remedial Project Manager

cc: Eugene Bernstein, Sidley & Austin
Diane Richardson, Commonwealth Edison
Alan Bielawski, Sidley & Austin
Jerry Willman, IEPA
John Chitwood, BVWS, Inc.
Stuart Hersh, U.S. EPA
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